

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

MAPUTO BAY ISRA

Western Indian Ocean Region

SUMMARY

Maputo Bay forms part of a large bay in southern Mozambique. This area receives freshwater input primarily from five rivers: Incomati in the north, Maputo in the south, Umbeluzi, Matola, and Tembe in the west. At the entrance of the bay, there are dynamic sand banks, while mangroves and seagrass beds characterise much of the coastal habitat within it. Maputo Bay is shallow and predominantly sandy, with muddy areas at the entrance to river mouths. The area overlaps with the Incomati River to Ponta do Ouro and the Mozambique Channel Ecologically or Biologically Significant Marine Areas. Within this area there are: **threatened species** and **reproductive areas** (Milk Shark *Rhizoprionodon acutus*).

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

— MOZAMBIQUE —

— 0-15 metres —

— 247.28 km² —





DESCRIPTION OF HABITAT

Maputo Bay is part of a large bay located in southern Mozambique. Mangrove habitats occupy 14% of the larger bay, while seagrass meadows occupy 3% (Bento et al. 2023). The area receives freshwater input from several rivers (Incomati, Maputo, Umbeluzi, Matola, and Tembe), but is considered a saline environment, with the vertical profiles of salinity and temperature in the bay being considered vertically homogeneous (Canhanga & Dias 2005). River discharge has a strong seasonal cycle, with higher outflow during November–April (Markull et al. 2014). The area lies directly in front of the Incomati and Maputo River mouths and has a high tidal range of up to ~3 m (Markull et al. 2014). The area is split into a northwestern site off Macaneta Beach and a southern site off the mouth of the Maputo River. It is a shallow area with a depth of 5–15 m and the waters of the area in general being mostly ~10 m deep reaching 30 m at the mouth of the bay (Canhanga & Dias 2005). The area is characterised by sandy and muddy substrates.

Maputo Bay overlaps with the Incomati River to Ponta do Ouro and the Mozambique Channel Ecologically or Biologically Significant Marine Areas (EBSA; CBD 2023a, 2023b), and is also situated adjacent to the identified priority Ramsar site of the Maputo National Park, which is also a Key Biodiversity Area (KBA 2023).

This Important Shark and Ray Area is benthopelagic and extends from inshore and surface waters (0 m) to 15 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

The one Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. The Milk Shark is assessed as Vulnerable (Rigby et al. 2020).

SUB-CRITERION C₁ – REPRODUCTIVE AREAS

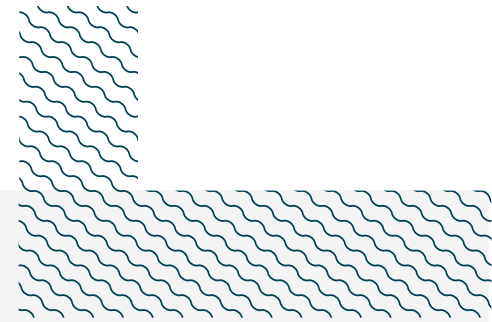
Maputo Bay is an important reproductive area for one shark species.

Artisanal fishery landing site surveys recorded Milk Shark neonates and young-of-the-year (YOY) between December 2018 and February 2020 at the Bairro dos Pescadores and Macaneta landing sites (Wildlife Conservation Society & InOM unpubl. data 2023). Of the 57 individuals landed, 44 were measured and had a total length (TL) ranging from 29–97 cm TL, with a mean of 42.8 ± 11.4 cm TL. Most of the individuals were in the 25–49.9 cm TL size class, with 32 neonates and 11 YOY. Size-at-birth for this species is ~25–45 cm TL (Harry et al. 2010; Shaaban et al. 2018) and, considering the growth rate for this species ($K = 0.18 \text{ year}^{-1}$; Ba et al. 2015), YOY individuals are ~43–63 cm TL. All Milk Sharks were caught in the austral summer from December to April, indicating a seasonal peak in pupping during the wet season characterised by high river discharge. Although no size data are available from other years, fishers indicated that they continued catching the species (Wildlife Conservation Society & InOM unpubl. data 2023).

Between 14 August and 8 September 2023, 30 fishers were interviewed to determine where they catch Milk Sharks in Maputo Bay. Fishers operate throughout the region, except inside the shipping channel that connects Maputo harbour to the open sea. Of these, nine indicated that they had caught Milk Sharks in the past and knew the locations where they normally catch them. A map with

grid cell references was then shown to each of these nine fishers who pointed out which grid cells were the main areas where they catch Milk Sharks.

Of note is that artisanal fishery landing site surveys took place at several other locations along the Mozambique coastline in the provinces of Inhambane, Zambezia, Nampula, and Cabo Delgado, yet the only sites where neonate and YOY Milk Sharks were landed were within the area at Macaneta and Bairro dos Pescadores (Wildlife Conservation Society & InOM unpubl. data 2023), thus indicating that Maputo Bay is an important reproductive area for this species in Mozambique.



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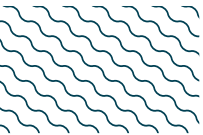
QUALIFYING SPECIES

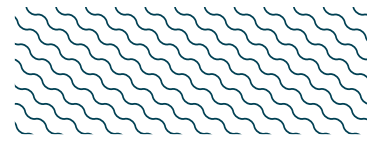
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
<i>Rhizoprionodon acutus</i>	Milk Shark	VU	1-200	X		X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Carcharhinus brevipinna</i>	Spinner Shark	VU
RAYS		
<i>Acroteriobatus leucospilus</i>	Greyspot Guitarfish	EN

IUCN Red List of Threatened Species Categories are available by searching species names at www.iucnredlist.org Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.





SUPPORTING INFORMATION

There are additional indications that Maputo Bay is an important area for range-restricted species and reproductive purposes of one shark and one ray species. Landing surveys at Macaneta and Bairro dos Pescadores included the threatened and range-restricted Greyspot Guitarfish (n = 7 individuals from May 2019 to March 2020) and Spinner Shark (29 individuals from January to December 2020, 78% of which were young-of-the-year) (Wildlife Conservation Society & InOM unpubl. data 2023).



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